

Work Order ID 85807

85807

Page 1

June-15-12 1:25:45 PM

Item ID: D3488-041

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Blade Fitting Assembly, LH

Start Date: 15/06/2012 Start Qty: 12.00

12

Cust Item ID:

Required Date: 29/06/2012 Req'd Qty: 12.00

12

Customer:

Reference:

Approvals: Process Plan: MLJ

Date: 12/06/15 Tooling:

Date:

Run Start *NR1*

QC:

Date: SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3488	Rev B								
100		0.00							
100	DOOSAN LATHE								
Doosan	Memo	0.00							
Doosan Lathe	1-Turn as per Dwg DSK 101 & Folio FA6252-Deburr								
				126/23					
110		0.00							
110	QC2- Inspect parts off machine FAI/FAIB								
QC	Memo	0.00							
Quality Control				125/23					
120		0.00							
120	HAAS CNC VERTICAL MACHINING #1								
HAAS I	Memo	0.00							
HAAS CNC vertical machine #1	1-Machine as per Folio FA625 & Dwg D34882-Deburr								

12

12

RT 12-06-24 (x12)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

130

QC2- Inspect parts off machine FAI/FAIB

0.00

130

QC

Memo

0.00

Quality Control

12-06-24 (12)

140

QC8- Inspect parts - second check

0.00

140

QC

Memo

0.00

Quality Control

12/06/24

12 0 12

150

Chemical Conversion Coat per QSI005 4.1

0.00

150

HandFinish

Memo

0.00

Hand Finishing

12 12-6-25

W/O:		WORK ORDER CHANGES					
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Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

160

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00

160

Powdercoat

Memo

0.00

Powder Coating

START TIME:

11h25

OVEN TEMPERATURE:

11h55 FINISH TIME:

320°F

mno222.

12 x 0 20 12/06/25

170

QC3- Inspect Part Finish

0.00

170

QC

Memo

0.00

Quality Control

12x 0 11 12/06/25

180

HandFinishing

0.00

180

HandFinish

Memo

0.00

Hand Finishing

Install Inserts as per Dwg D3488

12x 0 11 12/06/25

W/O:		WORK ORDER CHANGES					
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NOTE: Date & initial all entries

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Page 4

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NS1

Revision ID:

Item Name: Blade Fitting Assembly, LH

Stop

NS2

Start Date: 15/06/2012 Start Qty: 12.00

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Cust Item ID:

Required Date: 29/06/2012 Req'd Qty: 12.00

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Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190 *190* QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.00				12	0	12-7-3	
200 *200* Packaging Packaging	Identify as per dwg & Stock Location: <u>FP-1</u> Memo	0.00 0.00				x12	0	12-7-3	
210 *210* QC Quality Control	QC21- Final Inspection - Work Order Release Memo	0.00 0.00							12/7/4 MF 12-07-03

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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NOTE: Date & initial all entries

Picklist Print

June-15-12 1:25:50 PM

Page 1

Work Order ID: 85807

85807

Parent Item: D3488-041

D3488-041

Parent Item Name: Blade Fitting Assembly, LH

Start Date: 15/06/2012

Required Date: 29/06/2012

Start Qty: 12.00

Required Qty: 12.00

Comments: IPP Rev:A New Issue 06-02-28 JLM
IPP Rev:B As per Rev B 06-03-30 JLM
IPP Rev:C Now On Doosan Lathe JLM Verified BY:DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
ALS7-1032-225		Purchased		No			Each	1,075.000		48			

AI S7-1032-225

INSERT

**

11/06/25

D6103-003

Manufactured No

D6103-003

Round Billet, Aluminum

Location

ST282
100896
111529
~~118520~~

Loc Qty

1075
135
27
913

Loc Code

1A118520

448

Each

38.0000

**

12

SA

12/6/20

Location

MAT043
76982
82262
83408

Loc Qty

38
2
3
33

Loc Code

2

10

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order:	85807
Description: Blade Fitting, LH / Turning Detail for D3488-1/-2		Part Number:	D3488-1
Inspection Dwg: D3488 / DSK101 Rev: B / D		Page 1 of 2	

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Lathe Section						
Ø2.150	+/-0.005	2.150	/		2-3	
Ø2.780	+/-0.005	2.778	/			
Ø3.125	+/-0.010	3.123	/			
Ø3.346	+/-0.010	3.346	/		5-3	
0.125 x 45°	+/-0.010 x +/-0.1°	0.125 x 45°	/			
8.000	+0.030/-0.000	8.005	/			
9.250	+/-0.010	9.250	/			
0.188	+/-0.010	0.188	/			
R0.032	+/-0.010	R0.032	/		R.G.	
R0.062	+/-0.010	R0.062	/		R.G.	
Ø0.297	+0.005/-0.001	0.297	/			
Ø0.430	+/-0.010	0.430	/			
0.100	+/-0.010	0.097	/			
0.125	+/-0.010	0.130	/			
2.620	+/-0.010	2.617	/			
3.500	+/-0.010	3.500	/			
1.005	+/-0.010	1.005	/			
Ø0.484	+0.005/-0.001	0.484	/			
1.180	+/-0.010	1.180	/			
3.150	+/-0.010	3.150	/			
3.070	+/-0.010	3.070	/			
R0.063	+/-0.010	R0.063	/			

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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DART AEROSPACE LTD		Work Order:	85807
Description: Blade Fitting, LH / Turning Detail for D3488-1/-2		Part Number:	D3488-1
Inspection Dwg: D3488 / DSK101 Rev: B / D		Page 2 of 2	

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Milling Section						
Ø0.508	+0.006/-0.001	.507	✓		mic	BT-1
0.750	+/-0.010	.747	✓		vern	BT-4
1.500	+/-0.010	1.494	✓		vern	BT-4
11.18	+/-0.030	11.172	✓		height gauge	31006
R0.062	+/-0.010	.062	✓		Rad gauge	
0.125	+/-0.010	.120	✓		vern	BT-4
0.590	+/-0.010	.591	✓		height gauge	31006
0.793	+/-0.010	.796	✓		vern	BT-4
1.351	+/-0.010	1.350	✓		height gauge	31006
1.317	+/-0.010	1.321	✓		vern	BT-4
1.802	+/-0.010	1.800	✓		depth gauge	BT-6

Measured by: BT	Audited by: [Signature]	Prototype Approval:	N/A
Date: 12-06-24	Date: 12/06/24	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	06.03.31	New Issue	KJ/JLM	
B	08.09.19	Reformat P/O D3488-041	KJ/JLM	
C	08.12.02	Dimension 8.000 removed	KJ/JLM	[Signature]

Dart Aerospace Ltd

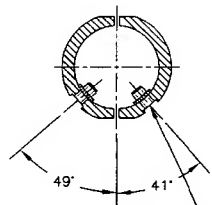
W/O:		WORK ORDER CHANGES					
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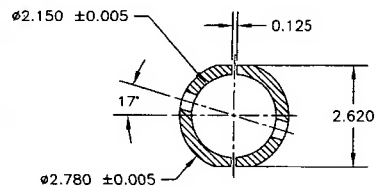
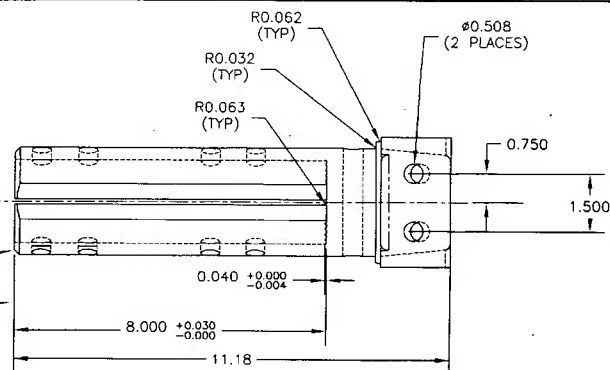
SECTION B-B

Ø0.297
C'BORE Ø0.430 x 0.100
INSTALL ALS4-1032-225 (OR AKS4-1032-225
OR ALS7-1032-225 OR AKS7-1032-225)
INSERTS AFTER FINISH
(4 PLACES)

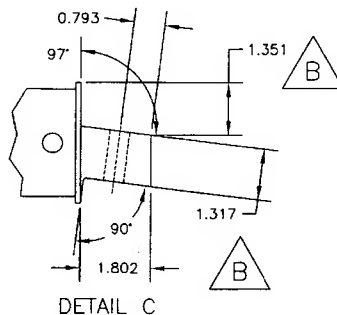
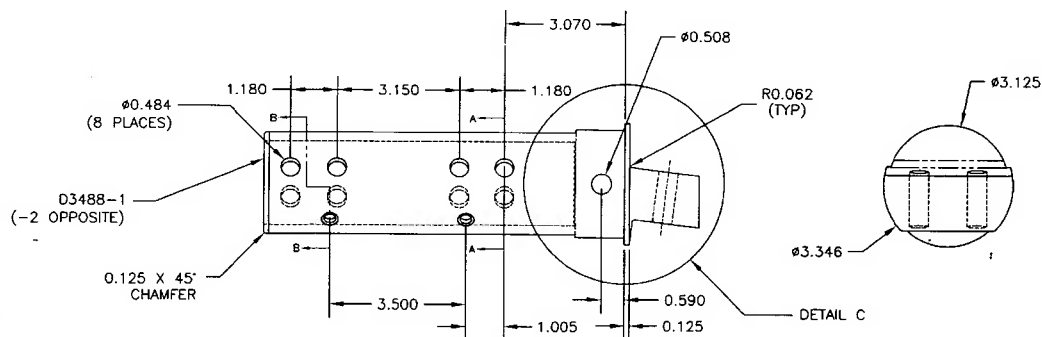
4

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER

NO. 8580745
12/06/15



SECTION A-A



DETAIL C

RELEASED
06.03.15 PH
PER DS
ECN #734

D3488-041 SHOWN (D3488-042 OPPOSITE)

D3488-041/-042 BLADE FITTING ASSEMBLY PARTS LIST

QTY -041	QTY -042	PART NUMBER	DESCRIPTION
X	X	D3488-041	BLADE FITTING ASSEMBLY (LH)
		D3488-042	BLADE FITTING ASSEMBLY (RH)
1		D3488-1	BLADE FITTING (LH)
		D3488-2	BLADE FITTING (RH)
4	4	ALS4-1032-225 or AKS4-1032-225 or ALS7-1032-225 or AKS7-1032-225	INSERT

D3488-041/-042 BLADE FITTING

- MATERIAL: MAKE D3488-1/-2 FROM ALUMINUM 7075-T7351 ROUND BAR PER QQ-A-225/9 (REF. DART MATERIAL SPEC M7075T73R)
- FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1 POWDER COAT WHITE (REF 4.3.5.1) PER DART QSI 005 4.3
- BREAK UNMARKED SHARP EDGES 0.010 TO 0.020
- INSTALL INSERTS AFTER POWDER COAT
- ALL DIMENSIONS ARE IN INCHES
- TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

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B	06.03.15	CHANGE THICKNESS
A	05.12.20	NEW ISSUE
DESIGN	PH	DRAWN BY PH
CHECKED	#	APPROVED #
DATE	06.03.15	TITLE
		BLADE FITTING
		DART AEROSPACE USA, INC. PORT HADLOCK, WA
		DRAWING NO. D3488
		REV. B
		SHEET 1 OF 1
		SCALE 1:3

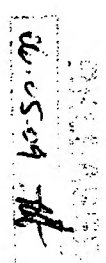
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector



Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

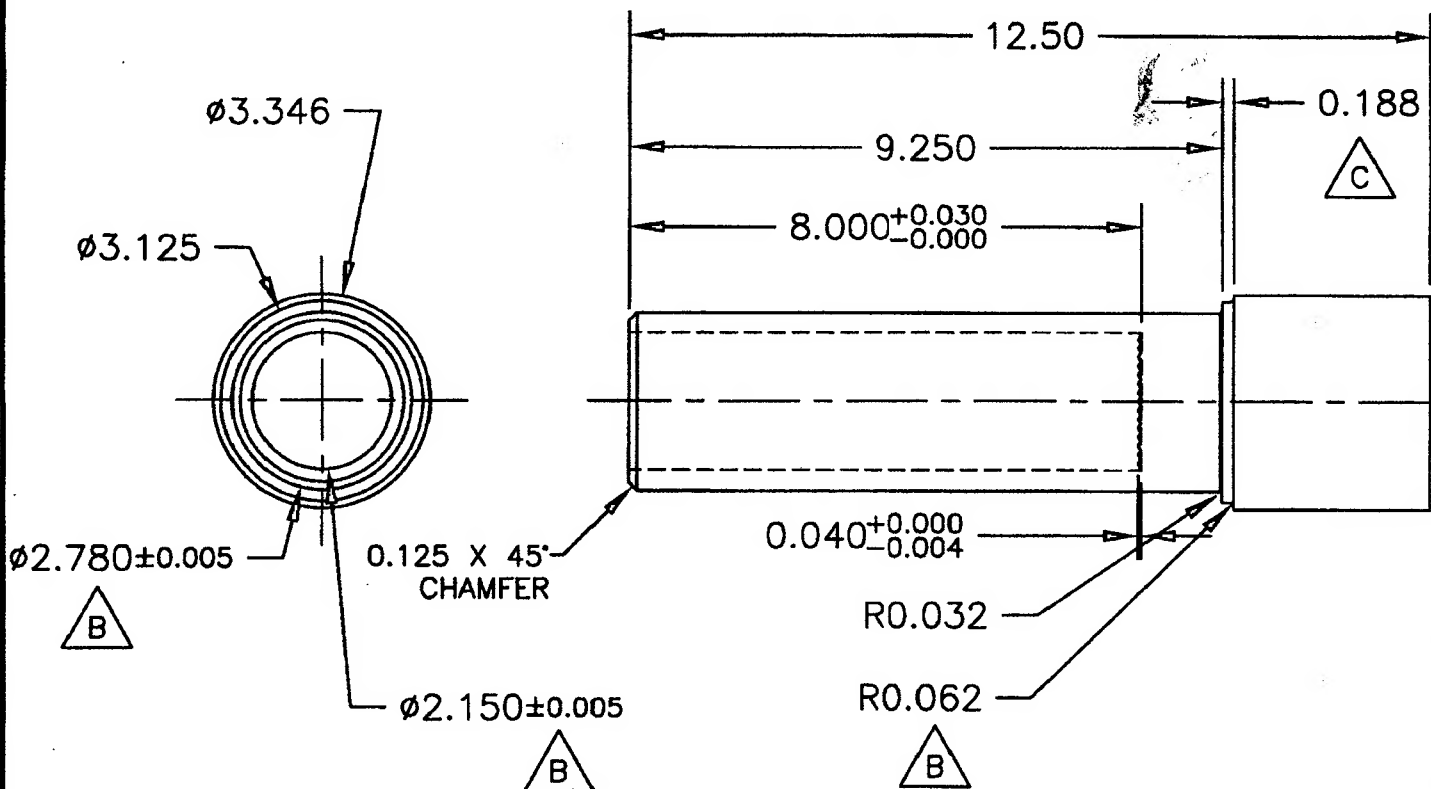
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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NOTE: Date & initial all entries



DESIGN	PH	DRAWN BY	PH	DART AEROSPACE USA, INC.	
				PORT HADLOCK, WA	
CHECKED		APPROVED		DRAWING NO.	REV. D
				DSK 101	SHEET 1 OF 1
DATE				TITLE	SCALE
06.05.09				D3488-1/-2 TURNING DETAIL	1:3
A				05.12.21	NEW ISSUE
B				06.03.02	ADD TOLERANCES AND RADIUS
C				06.04.17	0.188 WAS 0.125
D				06.05.09	REMOVE DIAMETER FOR CHAMFER



DSK 101

- 1) MATERIAL: MAKE FROM ALUMINUM 7075-T7351 ROUND BAR PER QQ-A-225/9
(REF. DART MATERIAL SPEC M7075T73R)
- 2) FINISH: NONE
- 3) BREAK UNMARKED SHARP EDGES 0.010 TO 0.020
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED